

Name Key

Date \_\_\_\_\_

202 Chapter 1.1-1.5 Review

247

Find the **perimeter** of  $\triangle ABC$ . Leave the answer in reduced radical form.

① A(0,6), B(-6,-2), C(8,-4)

→ ② A(1, 3), B(6, -2), C(1, -2)

$AB = \sqrt{(0 - (-6))^2 + (6 - (-2))^2} = \sqrt{36 + 64} = 10$

$10 + 10\sqrt{2} + 2\sqrt{11}$

$AB = \sqrt{(6-1)^2 + (-2-3)^2} = 5\sqrt{2}$

$BC = \sqrt{(-6-8)^2 + (-2-(-4))^2} = 10\sqrt{2}$

36.9 units

$BC = \sqrt{5^2 + (-2-3)^2} = 5$

$10 + 5\sqrt{2}$

$AC = \sqrt{(8-0)^2 + (-4-6)^2} = 2\sqrt{41}$

$AC = \sqrt{0^2 + (3-(-2))^2} = 5$

17.1

③ M is the midpoint of  $\overline{LN}$ . Find the missing coordinates.

a. L(5, -2) M(x, y) N(-3, 8)  $(1, 3)$

b. L(8, -1) M(6, 0) N(x, y)  $(4, 1)$

c. L(x, y) M( $\frac{1}{2}$ , -4) N(3, 2)  $(-2, -10)$

A B C

④ Solve for x.

a.  $AB = 3x$ ,  $BC = 8x + 2$ ,  $AC = 24$

$11x + 2 = 24$   
 $11x = 22$   
 $x = 2$

b.  $AB = 2x - 5$ ,  $BC = 8 - x$ ,  $AC = 6$

$x + 3 = 6$   
 $x = 3$

Use the figure to the right to answer the following questions.

$AC \perp DH$

$\angle CAH$   $\angle BAH$

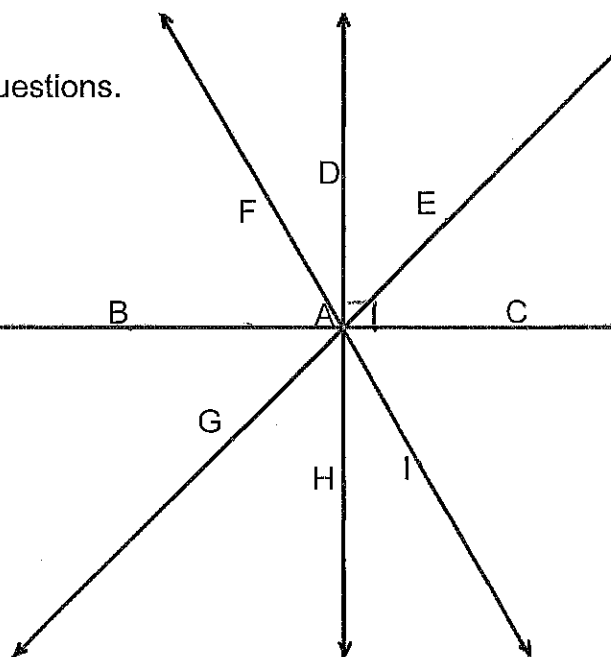
5.  $\angle DAC$   $\angle DAB$  Name 2 right angles

6.  $\angle DAF$   $\angle HAI$  Name 2 vertical angles

7.  $\angle DAE$   $\angle EAC$  Name 2 adjacent angles

8.  $\angle BAE$   $\angle EAC$  Name a linear pair

9.  $\angle FAD$   $\angle EAC$  Name 2 acute angles



10.  $\angle FAC$   $\angle BAI$  Name 2 obtuse angles

11.  $\angle DAE$   $\angle EAC$  Name 2 complementary angles

12.  $\angle EAI$   $\angle IAG$  Name 2 supplementary angles

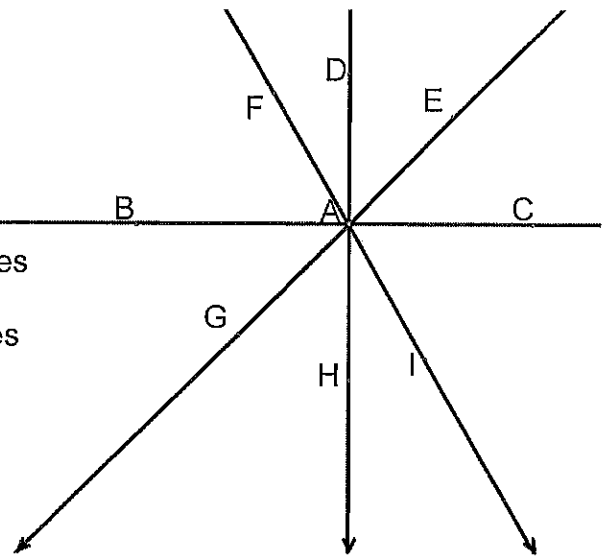
13.  $\angle BAC$   $\angle GAE$  Name 2 straight angles

\* 14.  $\overrightarrow{AB}$   $\overrightarrow{AG}$  Name the sides of  $\angle BAG$

\* 15.  $A$  Name the vertex of  $\angle DEA$

16.  $\angle DAE \cong \angle EAC$  If  $\overrightarrow{AE}$  bisects  $\angle DAC$ , what conclusion can you make?

17.  $\angle HAG$  Give another name for  $\angle GAH$



Use the figure to the right to answer the next set of questions.

18.  $DFG$ ,  $CGH$ ,  $EAB$  Name 3 planes

19.  $\overrightarrow{DF}$ ,  $\overrightarrow{EG}$ ,  $\overrightarrow{CH}$  Name 3 lines

20.  $D, F, G$  Name 3 coplanar points

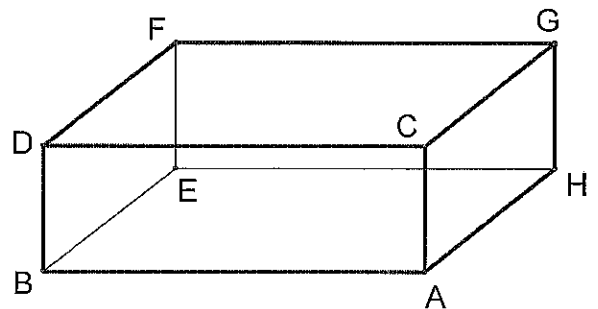
21.  $D, F, G, C$  Name 4 coplanar points

22.  $D, F, G, A$  Name 4 non-coplanar points

23. No Can you name 3 non-coplanar points?

24.  $D, F$  Name 2 collinear points

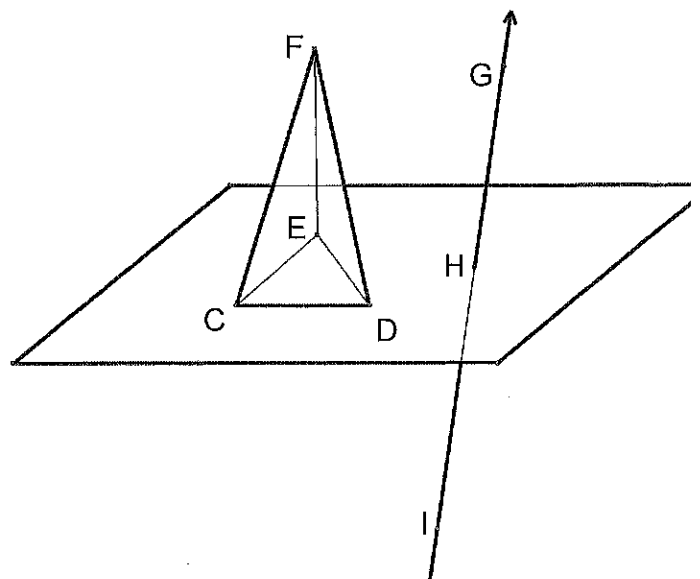
25. No Can you name 2 non-collinear points?



Use the figure to the right for the next set of questions.

26. 4 How many planes do you see?

27.  $CDE$ ,  $CDF$ ,  $CEF$ ,  $DEF$  Name them



Answer True or False for #s 28-31.

28. False  $\overleftrightarrow{HG}$  is contained by plane DCE

29. True  $\overline{CD}$  is contained by plane DCE

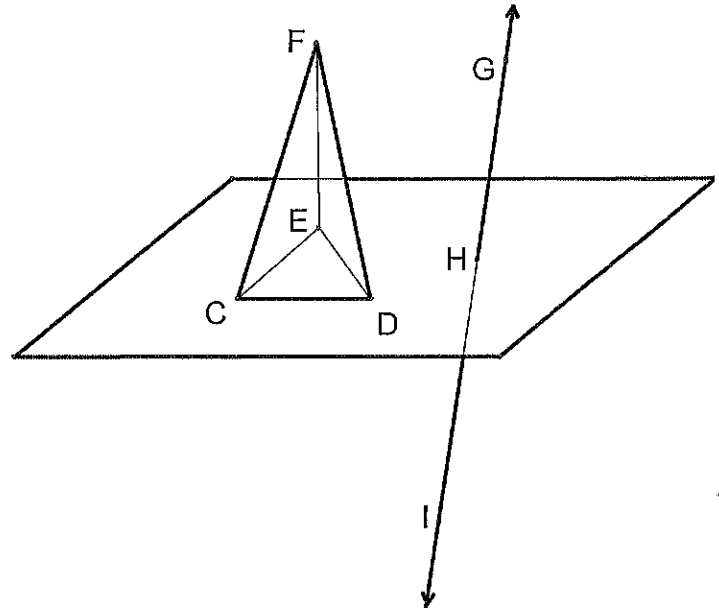
30. False Points C, D, & E are collinear

31. True Points F & H are collinear

32.  $\overleftrightarrow{HG}$ ,  $\overleftrightarrow{GI}$ ,  $\overleftrightarrow{HI}$  Give another name for  $\overleftrightarrow{GH}$   $\overleftrightarrow{HG}$ ,  $\overleftrightarrow{IH}$

33. CDH Give another name for plane CDE

34. pt H Where do plane DCE and  $\overleftrightarrow{GI}$  intersect?



35. An angle is 12 degrees more than its complement. Find the measure of the complement.

$$x + y = 90$$

$$x = 12 + y$$

$$12 + y + y = 90$$

$$2y = 78$$

$$y = 39$$

36. An angle is 15 degrees less than twice its complement. Find the angles.

$$x + y = 90$$

$$x = 2y - 15$$

$$2y - 15 + y = 90$$

$$3y = 105$$

$$y = 35$$

$$x = 55$$

37. Find two supplementary angles if one is four times the other.

$$x + y = 180$$

$$x = 4y$$

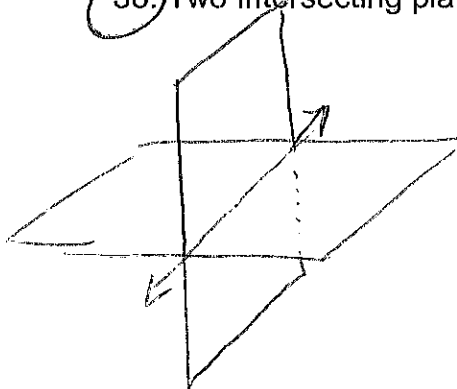
$$5y = 180$$

$$y = 36$$

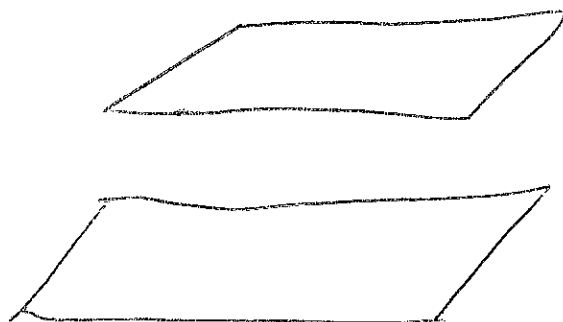
$$x = 144$$

Draw the following.

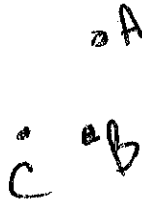
38. Two intersecting planes



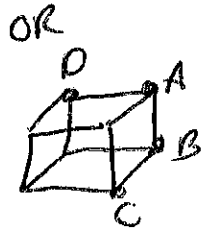
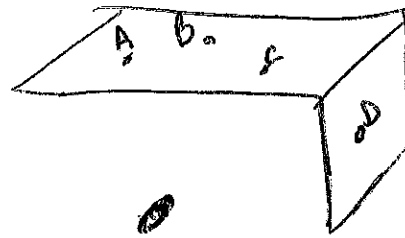
39. Two planes that do not intersect



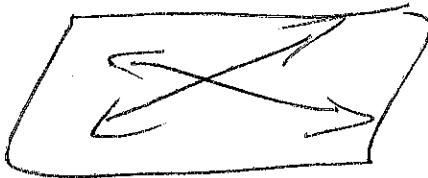
40. Three non-collinear points



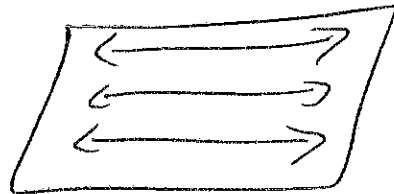
41. Four non-coplanar points



42. Two intersecting lines that are coplanar



43. Three coplanar lines that do not intersect



Use the figure to the right for the next set of questions.

$\overleftrightarrow{AB} \perp \overleftrightarrow{BE}$ ,  $\overleftrightarrow{BF} \perp \overleftrightarrow{BD}$   
 $\overleftrightarrow{BC}$  bisects  $\angle DBG$

44.  $m\angle FBE = 4x - 4$   
 $m\angle EBD = 9x + 3$

$13x - 1 = 90$   
 $13x = 91$   
 $x = 7$

Find the angles.  
 $24^\circ$   $66^\circ$

45.  $m\angle DBC = 4x + 3$   
 $m\angle CBG = 6x - 17$

Find  $m\angle DBG$ .  $4x + 3 = 6x - 17$   
 $86^\circ$   $26 = 2x$   
 $13 = x$

46.  $m\angle DBC = 4x - 1$   
 $m\angle DBG = 10x - 20$   
 Find  $m\angle DBC$ .  
 $35^\circ$

$4x - 1 = \frac{1}{2}(10x - 20)$   
 $4x - 1 = 5x - 10$   
 $9 = x$

47.  $m\angle ABD = 10x$   
 $m\angle DBC = 2x$   
 Find  $m\angle ABD$ .  
 $150^\circ$

48.  $m\angle FBE = 25^\circ$

Find:  $m\angle FBE = 25^\circ$   
 $m\angle DBC = 25^\circ$

$m\angle DBE = 65^\circ$   
 $m\angle CBG = 25^\circ$

$m\angle FBA = 65^\circ$